



Docket No.: 1453.1001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Akira SUGIYAMA

Serial No. 09/377,827

Group Art Unit: 2837

Confirmation No. 8358

Filed: August 20, 1999

Examiner: M. Fletcher

For: DATA PROCESSOR

**APPEAL BRIEF UNDER 37 CFR § 41.37**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

In a Notice of Appeal filed April 20, 2005, applicant appealed the Examiner's October 20, 2004, Office Action finally rejecting claims 1-7. Appellant's Brief was accordingly due June 20, 2005. Accordingly, Appellant's Brief together with the requisite fee of \$500.00 set forth in 37 CFR § 1.17, and concurrently with a petition for a two-month extension of time, is submitted herewith.

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**I. REAL PARTY IN INTEREST (37 CFR § 41.37(c)(1)(i))**

The real party in interest is Akira Sugiyama, the Inventor of the subject application.

**II. RELATED APPEALS AND INTERFERENCES (37 CFR § 41.37(c)(1)(ii))**

The applicant and the undersigned representative are not aware of any other appeals or interferences that will directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

Serial No. 09/377,827

Docket No. 1453.1001

**III. STATUS OF CLAIMS (37 CFR § 41.37(c)(1)(iii))**

The rejection of all pending claims 1-7 are under appeal.

**IV. STATUS OF AMENDMENTS (37 CFR § 41.37(c)(1)(iv))**

No amendments have been filed since the filing of the Notice of Appeal on April 20, 2005.

**V. SUMMARY OF INVENTION (37 CFR § 41.37(c)(1)(v))**

The background of the present application, on page 1, last paragraph, explains that conventionally symbolized characters have been expressed digitally as either "1" or "0", noting that such expressions with binary representation requires a large storage area.

Accordingly, as detailed in the Summary of the Invention, embodiments of the present invention overcome these conventional difficulties by using a code table "in which each scale in the music staff is correlated with each of the exhibited characters and symbols," such that an "exhibited character and symbol data are converted into data in the form of scales on the music staff," or vice versa.

Here, independent claim 1 sets forth:

"[a] data processor using a computer and a staff notation comprising:

a computer keyboard for input of character or symbol data, not related to musical data, into said data processor;

a note code table to correspond the inputted character or symbol data input into said data processor with musical data comprising scales of music staff notation;

a note decoder to decode the inputted character or symbol data to corresponded to scale code data using said note code table;

a note code storage device to store output data from said note decoder in order as music staff notation data; and

an outputting means for outputting the music staff notation data from the note code storage device."

Similarly, independent claim 6 sets forth:

"[a] data processor, comprising:

a note code table to correlate non-music staff character or symbol data input into the data processor with scales of music staff notation;

a note decoder to convert input data to scale code data using said note code table;

an output unit to output the converted input data."

Here, FIG. 8 illustrates such a keyboard 1, a note code table device 10 to store the note code table, a note decoder 8, and a storage unit, e.g., CRT 5, printer 6, storage unit 7, and I/O

port 11.

Thus, using a keyboard, a user can input character or symbol data and the note decoder can convert the input character or symbol data into music staff notation data, using the note code table, i.e., input character or symbol data can be converted to music staff notation data.

Applicant has also particularly claimed that the input character or symbol data is non-music data, as illustrated in FIGS. 6 and 7, referenced in lines 1-7 on page 6. The specification on page 5, lines 8-29, explains how input characters or symbols having different sounds, language, or different format (e.g., capitalized or small letters) can be expressed as eighth notes, eighth notes raised by one semitone, eighth notes lowered by one semitone, quarter notes, and sixteenth notes, for example. Pages 6-7 also provide another explanation of the aforementioned decoder operating with the note code table to output the music scale data corresponding to the non-music input character or symbol data.

Page 8 of the specification also explains how the note code table can be generated, e.g., by assigning notes, respectively, to different keys arranged on a keyboard, for example.

Thus, the independent claims are directed toward converting non-music input character or symbol data, e.g., a key on a standard typing computer keyboard, into a music staff notation data.

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 CFR § 41.37(c)(1)(vi))**

Claims 1-7 stand rejected under 35 USC 103 as being obvious over the teaching of Satoh et al., U.S. Patent No. 5,038,659, and Tanimoto, U.S. Patent No. 4,450,743.

Essentially, the Examiner has argued that Satoh et al. discloses all the claimed features, except, potentially, the claimed note code tables providing a listing of note codes that correspond to input data, indicating that such a feature is inherent within Satoh et al. or obvious because “Tanimoto provides a clear correlation of input data with stored table data including note codes to produce output data, wherein Satoh et al. provide correlation of input data with output data, only failing to show a clear correlation with the note codes,” as indicated on page 3, fourth paragraph of the Office Action mailed October 20, 2004, further noting, at the top of page 4, that such a combination “provides teachings of input data to the conversion of output data, wherein the output data corresponds to musical data.”



**VII. ARGUMENT OF EACH GROUND OF REJECTION PRESENTED FOR REVIEW (37 CFR § 41.37(c)(1)(vii))**

As noted above, the Examiner would appear to be setting forth a rejection rationale that it would have been obvious to modify Satoh et al. to operate as claimed, based on the disclosure of Tanimoto showing an input device, which has number keys, used to input musical staff notation data.

It is noted that the Examiner has also further emphasized an interpretation of Tanimoto, on page 3, lines 8-9, "wherein input data and note codes also correspond to musical staff notation." Thus, the Examiner has based the proffered modification of Satoh et al. on Tanimoto using a keyboard to input music data.

However, as pointed out in previous responses, the independent claims have clearly been amended to require the keyboard for "input of character or symbol data, not related to musical data," as recited in independent claim 1, for example, noting that the claimed note code table corresponds "the inputted character or symbol data" input into said data processor with musical data comprising scales of music staff notation."

Thus, if any input device inputs "character or symbol data" related to musical data, for subsequent conversion using the note code table, then that input device cannot meet the claimed computer keyboard. Independent claim 6 similarly claims that the note code table correlates non-music staff character or symbol data into the data processor with scales of music staff notation.

In the independent claims, the input character or symbol data is not related to musical data, and thus, any interpreted note code table of any reference must correspond the input character or symbol data with musical data comprising scales of music staff notation.

The aforementioned amendment to independent claim 1 was presented in the immediately prior response to the outstanding Final Office Action.

In response thereto, the Examiner indicated that the "amendments do not provide significant changes to the claims," and thereafter attempts to rebut applicant's traversal of the then outstanding obviousness rejection.

Thus, though applicant particularly set forth a negative limitation, clarifying that the input

data is not related to music, the Examiner failed to give that feature sufficient weight and maintained the previous rejection.

With regard to applicant's traversal of the obviousness rejection, on page 4 of the outstanding Office Action, the Examiner merely reiterates the belief that "[i]n combination, the references provide the teachings as claimed by the applicant....Tanimoto provides a clear correlation of input data with stored table data to provide a musical output representation based on the conversion of input data to output data...The references are combined to show that at the time of the invention was made that it would have been obvious to combine the references." Thus, an underpinning of the outstanding rejection is that if the cited references were to be combined, then it would have been obvious to combine the references, which would appear improper.

Regardless, it is respectfully submitted that it would both not have been obvious to combine the Satoh et al. and Tanimoto, and that even if combined, the combined two references still fail to disclose the presently claimed invention.

In the response filed December 13, 2001, applicant explained in detail what both Satoh et al. and Tanimoto disclose, and what features both references failed to disclose, and pointed out that there was no suggestion for the purported combination of references. In response to this response, the corresponding rejections would appear to have been reasserted repeatedly based on the conclusion that, once combined, the two references disclose the presently claimed invention, and that it would have been obvious to incorporate a table feature from Tanimoto into Satoh et al., since Satoh et al. suggested the same.

Applicants repeatedly thereafter pointed out that the underlying obviousness rationale is improper. The underlying obviousness is being based on the opinion of the Examiner and fails to be based on any suggestion or motivation from any cited or evidenced source.

The Office Action repeatedly details what features Satoh et al. is being interpreted as not disclosing, and what features of Tanimoto are being modified into Satoh et al., and thereafter, on page 4, states "[i]n combination, the reference provides the teaching as claimed by the applicant. While Satoh et al. shows the correspondence or result of the input data in relation to notes, it is obvious that the same could be shown in a table to show the same relationship... Tanimoto provides a clear correlation of input data with stored table data to provide a musical

output representation based on the conversion of input data to output data.”

As noted above, the Office Action appears to be making the argument that once the two references are combined, the obviousness of that combination is then disclosed. However this is improper. Before any modification of any reference, there must be some need, desire, suggestion, or motivation for that modification. There must be some reason for modifying Satoh et al., other than to disclose the presently claimed invention. The fact that Tanimoto may disclose note code tables is not relevant unless there is some concrete evidence in the record that one skilled in the art would have been motivated to modify that feature into Satoh et al.

The Office Action indicates that because Satoh et al. broadly provides a correlation of input data with output data, then it would have been obvious to perform that correlation with a table. Then, after that obviousness conclusion, the Office Action relies on Tanimoto to provide that table. Thus, the Office Action would appear to be missing the required link between Satoh et al. and Tanimoto, i.e., the evidenced motivation to perform the correlation in Satoh et al. with a table. In addition, the Office Action further needs evidence that the table of Tanimoto would be desirable/needed/suggested to meet the table modified into Satoh et al.

Thus, it is respectfully submitted that a prima facie obviousness case still has not been presented for the proffered combination of Satoh et al. and Tanimoto.

Further, the Office Action relies on the keyboard 2 of Satoh et al. to disclose the claimed computer keyboard of claim 1. The Office Action then states: "Satoh et al., also disclose that the note code tables or data correspond with non-music staff character or symbol data," and references the disclosure of Satoh et al. related to keyboard 2.

The Office Action thereafter appears to take the input of words from keyboard 2, of Satoh et al., and infer that such words are incorporated into any input conversion of Satoh et al. into note data. However, the inputting of words in keyboard 2 has no correlation to any musical keyboard input conversion to note data, i.e., it is just for input of non-musical data that is not used for any corresponding conversion. The two are distinct.

As noted in previous responses, Satoh et al. sets forth a musical score forming apparatus having a piano keyboard for entering notes and a function keyboard for entering words or numbers. The words are positioned above each line of the score to correspond to the applicable note combinations, and the numbers are utilized to determine a note's duration.

Based on a note entered in the piano keyboard, and its duration entered on the function keyboard, a corresponding note is placed on a staff in a musical score. See col. 5, line 37, through col. 6, line 24.

Thus, the placement of a note on a staff in a musical score, in Satoh et al., is only based on input musical data, i.e., notes entered from the piano keyboard or note duration entered from the function keyboard.

Also, as previously noted and regarding the entering of information in function keyboard 2, Satoh et al. also allows a user to enter word data, which is placed above a corresponding note in a staff, with a CPU receiving the inputted word and determining its proper placement. See col. 9, lines 8-25, and col. 10, line 27, through col. 11, line 36.

As illustrated in FIG. 17, of Satoh et al., characters of the entered words, which may be entered as Roman characters, can be easily converted to Japanese characters. Though this is not musical data, **it still is not being converted into note data**, as relied upon in the Office Action to disclose the claimed note code table "to correspond the inputted character or symbol data into said data processor with scales of music staff notation," recited in independent claim 1, or the non-music staff character or symbol data," recited in independent claim 6. Thus, it appears that the Office Action has misinterpreted the operation of Satoh et al.

Satoh et al. does not use any tables for note determination. It is noted that the outstanding Office Action points to Satoh et al. in col. 9, lines 8-25, to illustrate the inherency of the note code tables in Satoh et al.

Conversely, as noted above, the corresponding portion of Satoh et al. is unrelated to a note determination. The table referenced in col. 9 of Satoh et al. corresponds to a Roman character to Japanese character conversion for words entered. However, the words entered in Satoh et al. are unrelated to the note determination, these words are merely to be displayed above a staff, i.e., they are lyrics of a corresponding song.

The fact that Satoh et al. does not disclose tables being used for the proffered note determination further evidences that Satoh et al. does not provide the concrete evidence of motivation/suggestion for modifying Satoh et al. to utilize a table for such a note determination. This section of Satoh et al. pertains to the use of tables for the non-musical input data, unrelated to the musical data entered and used to generate note data. Thus, the use of tables in this

section cannot be the "inherent" support for the use of tables in the note determination portion of Satoh et al.

Regardless, the non-musical data input in Satoh et al. is not converted into note data, and therefore is unrelated to the disclosure in Satoh et al. regarding the conversion of input musical data into note data. Conversely, if the words input in Satoh et al. are interpreted as being related to the corresponding converted note data, then those input words would then actually be musical data, in which case the same still would not disclose the presently claimed invention since the claims particularly claim that the input data is not musical data.

The present invention is fundamentally different from Satoh et al. and Tanimoto, in that the present invention is directed toward converting non-musical input data into musical data, e.g., words could be input and could be converted into staff notation musical data. A paragraph could be converted into music, and potentially at a later date the music could be converted back into the paragraph.

Thus, it is respectfully submitted that the outstanding Office Action has failed to disclose a prima facie obviousness case. In addition, the underlying references fail to disclose all the claimed features, alone or in combination, and the underlying rationale for combining the references fails to be supported by evidenced motivation in the record.

Respectfully submitted,

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Serial No. 09/377,827

Docket No. 1453.1001

**CLAIMS APPENDIX (37 CFR § 41.37(c)(1)(viii))**

1. (Previously Presented) A data processor using a computer and a staff notation comprising:
  - a computer keyboard for input of character or symbol data, not related to musical data, into said data processor;
  - a note code table to correspond the inputted character or symbol data input into said data processor with musical data comprising scales of music staff notation;
  - a note decoder to decode the inputted character or symbol data to corresponded to scale code data using said note code table;
  - a note code storage device to store output data from said note decoder in order as music staff notation data; and
  - an outputting means for outputting the music staff notation data from the note code storage device.
2. (Previously Presented) A data processor using a computer and a staff notation according to claim 1, wherein said note code table is a list corresponding data input, arranged in order, with plural scales of music staff notation arranged in random order.
3. (Previously Presented) A data processor using a computer and a staff notation according to claim 1, wherein said note code table includes a plural listing corresponding data input, arranged in random order, with a scale of music staff notation.
4. (Previously Presented) A data processor using a computer and a staff notation according to claim 1, wherein said note code table is a list corresponding data input, arranged in random order, with and a scale of music staff notation arranged in random order.
5. (Previously Presented) A data processor using a computer and a staff notation according to claim 1, wherein the data processor includes a plurality of note code tables selectively set as said note code table.

6. (Previously Presented) A data processor, comprising:  
a note code table to correlate non-music staff character or symbol data input into the data processor with scales of music staff notation;  
a note decoder to convert input data to scale code data using said note code table;  
an output unit to output the converted input data.

7. (Original) A data processor according to claim 6, wherein said note code table is a list to correlate data input, arranged in order, with plural scales of music staff notation arranged in random order.

Serial No. 09/377,827

Docket No. 1453.1001

**EVIDENCE APPENDIX (37 CFR § 41.37(c)(2))**

N/A



Serial No. 09/377,827

Docket No. 1453.1001

**RELATED PROCEEDINGS APPENDIX (37 CFR § 41.37(c)(2))**

N/A